

"John Tappen was one of the solid men of Boston, a philanthropist, greatly interested in anti-slavery and church extension, next door neighbor and friend of Edward Everett and my father's particular friend. Of Mr. Greene I have no especial knowledge. His name occurs in connection with the forwarding of scientific work."

There is nothing in the Emmons list to show that Audubon added any notes to it.—RUTHVEN DEANE, *Chicago, Ill.*

RECENT LITERATURE.

Pycraft on the Morphology of the Cassowaries and their Allies.¹—In this important paper, which appears as the second part of Rothschild's 'Monograph of the Genus *Casuarius*,' Mr. Pycraft has endeavored to ascertain, so far as possible, the relations of the *Casuariidæ* to the remaining 'Struthious' forms and the position of these with regard to the *Carinatae*. We entirely agree with the author that the attempt has not been fruitless, and we heartily second Mr. Pycraft's thanks to Mr. Rothschild for entrusting the work to his hands.

The bulk of the paper is devoted to a description of the pterylosis and anatomical characters of the various forms under consideration, presented in Mr. Pycraft's usual clear and concise style. The repetition of the detailed descriptions of anatomical characters that have been given by other writers has been purposely and advantageously omitted, but a list of these papers is appended; while practically all the information is given that one would be likely to use. Moreover there is a carefully prepared key to the osteology of the *Palæognathæ*, based on the characters afforded by the adult skeleton, in which are set forth the distinctive characters of the existing genera and species of Struthious birds and *Apteryges* as shown by the skull, vertebral column and limbs. The *Dinornithidæ*, *Æpyornithidæ* and *Crypturi* are diagnosed as to family characters only.

The gist of the paper is to be found in the introductory remarks and final discussion of the phylogeny of the *Palæognathæ*. In the union of the *Tinamous* and 'Ratitæ,' which the author regards as a real need, he is in accord with Gill, and with Stejneger and other American ornithologists who have long held that while the division of birds into *Ratitæ* and *Carinatae* might be convenient it was not founded on a good morphological

¹On the Morphology and Phylogeny of the *Palæognathæ* (*Ratitæ* and *Crypturi*) and *Neognathæ* (*Carinatae*). By W. P. Pycraft. *Trans. Zool. Soc., London*, Vol. XV, Part V, No. 6, pp. 149-290, pll. xlii-xliv, December, 1900.

basis. Abroad, the effect of conservatism has been such, that, aside from Garrod and Fürbringer, Merrem's divisions, which had the sanction of adoption by Huxley, have been almost universally retained, and even Gadow in his Classification of the Vertebrata keeps the Tinamous in an order next the fowls. We are therefore glad to see these birds placed by Mr. Pycraft where we believe them to belong and where a strict osteological diagnosis puts them.

Mr. Pycraft uses the antithetical terms Palæognathæ and Neognathæ to designate the two main groups into which he divides existing birds, the former comprising the 'Ratite' birds and Tinamous, the latter including all other birds.

The Neognathous type of palate is considered to have been derived from the Palæognathous, the Tinamous presenting a stage somewhat intermediate between the two, and the palate of *Rhea* indicating how the change may have been brought about; furthermore the ægithognathous and schizognathous types of skull are but modifications of the dromæognathous, and the desmognathous a secondary modification of the schizognathous. This last may, we think, be accepted without question, but the former statement should at present be received with a little caution owing to our exceedingly imperfect knowledge of early birds. It may not be amiss here to say that the skull of *Hesperornis*, as shown by a specimen in the University of Kansas, was devoid of basipterygoid processes and that the arrangement of the bones of the palate appears to have been very peculiar.

The palæognathæ are regarded as polyphyletic probably tri-phyletic, while the neognathæ have been derived as a diverging branch from that stock which gave rise to *Rhea*, *Dinornis* and *Æpyornis*. *Dromæus* is the most primitive of living birds, with *Casuarinus* not far distant, while *Struthio* is perhaps derived from the same ancestral stock as these two and is not far removed. *Apteryx* is looked upon as quite distinct from the others, and *Rhea* as the most highly specialized of the large forms.

Such are some of the conclusions reached by Mr. Pycraft, and we are promised a discussion of the phylogeny of the Neognathæ later.—F. A. L.

Bangs on New American Birds.—During the last few months Mr. Outram Bangs has described a number of new American birds additional to those recently characterized by him in 'The Auk.' These include a new Honey Creeper from San Miguel Island, Panama,¹ which he has named *Cæreba cerinoclunis*; a new *Phaëthornis* (*P. longirostris susurrans*) from the Santa Marta region of Colombia²; a new *Ortalis* (*O. struthopus*) from San Miguel Island, Bay of Panama³; and a new form of the Red-

¹ Proc. New Engl. Zoölogical Club, II, pp. 51, 52. Feb. 8, 1901.

² *Ibid.*, pp. 63-65. July 31, 1901.

³ *Ibid.*, pp. 61, 62. July 31, 1901.